

Application No. 10/553,767
 Amendment dated February 18, 2008
 Reply to Restriction Requirement dated January 17, 2008

2

Docket No.: 62260A US

RECEIVED
 CENTRAL FAX CENTER

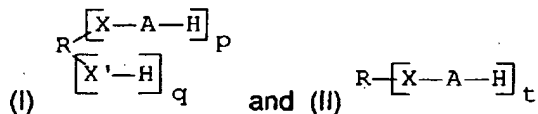
FEB 19 2008

AMENDMENTS TO THE CLAIMS

Please cancel claims 1-11, x-x, x, and x, and amend the claims as follows:

5 1-11. (Cancelled)

12. (Currently Amended) A vegetable oil based polyol, ~~comprised of~~
comprising

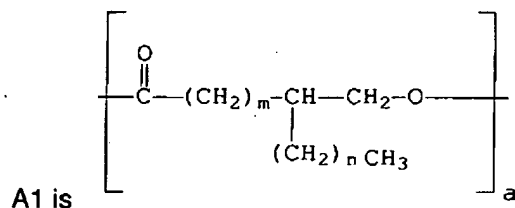


where

10 R is a residue of a polyol, polyamine or aminoalcohol initiator;

X and X' may be the same or different and is O, N or NH; p is an integer from 1 to 5; q is an integer from 1 to 5 wherein p + q is from 2 to 8, t is an integer from 2 to 8 and A may be the same or different and is selected from the group consisting of A1, A2 and A3 where

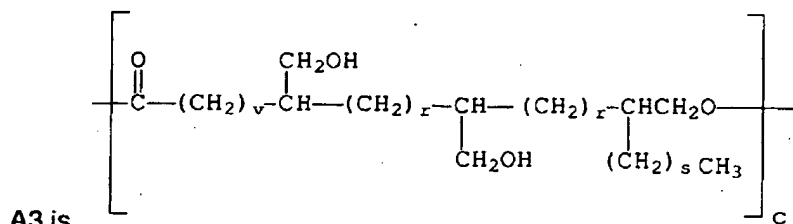
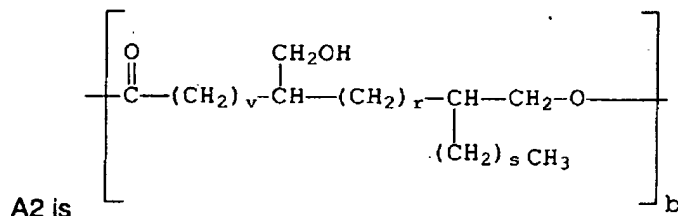
15



Application No. 10/553,767
 Amendment dated February 18, 2008
 Reply to Restriction Requirement dated January 17, 2008

3

Docket No.: 62260A US



where m, n, v, r, s, a, b and c are integers and m is greater than 3, n greater than
 5 or equal to zero and m+n is from 11 to 19, v is greater than 3, r is greater than or
 equal to zero, s is greater than or equal to zero and v+r+s is from 10 to 18, a is
 from 0 to 35, b is from 0 to 35 and c is from 0 to 35, wherein the amount of A3 is at
least 0.05 weight percent of the vegetable oil based polyol, so long as that all a's,
b's and c's are essentially not all zero, at least a portion of A is A3 and wherein
 10 (a+b+c)/(p+q+t) is greater than 0 and up to about 100 in the vegetable oil based
polyol.

13. (Currently Amended) The vegetable oil based ~~oil~~ polyol of Claim 12
 wherein (a+b+c)/(p+q+t) is about 0.5 to 50.

14. (Currently Amended) The vegetable oil based ~~oil~~ polyol of Claim 13
 15 wherein (a+b+c)/(p+q+t) is about 1 to 25.

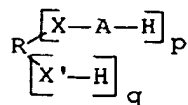
15. (Currently Amended) The vegetable oil based ~~oil~~ polyol of Claim 12
 wherein the initiator has a secondary hydroxyl group.

16. (Currently Amended) The vegetable oil based polyol of Claim 12
 wherein at least a portion of the vegetable oil based polyol has a structure

Application No. 10/553,767
 Amendment dated February 18, 2008
 Reply to Restriction Requirement dated January 17, 2008

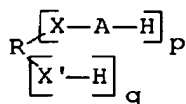
4

Docket No.: 62260A US



where at least one X'-H group is a primary hydroxyl or primary amine and at least one X-A-H group is located at a position corresponding to a secondary hydroxyl or secondary amine of the initiator.

- 5 17. (Original) The vegetable oil based polyol of Claim 16 wherein at least a portion of the vegetable oil based polyol has a structure:



- 10 where all of the X'-H groups are a primary hydroxyl or primary amine and all of the X-A-H groups are located at a position corresponding to a secondary hydroxyl or secondary amine of the initiator.

18. (Original) The vegetable oil based polyol of Claim 17 wherein the initiator is glycerol.

19. (Currently Amended) The vegetable oil based polyol of Claim 12 wherein the initiator is selected from the group consisting of neopentylglycol; 1,4-cyclohexane diol; 2,5-hexanediol; 1,6-hexanediol; 1,2-propylene glycol; 15 trimethylolpropane; pentaerythritol; sorbitol; sucrose; glycerol; 1,6-hexanediol; 1,4-butanediol; ethylene glycol; diethylene glycol; triethylene glycol; bis-3-aminopropyl methylamine; ethylene diamine; diethylene triamine; 9(1)-hydroxymethyloctadecanol; 1,4-bishydroxymethylcyclohexane; 8,8-20 bis(hydroxymethyl)tricyclo[5,2,1,0^{2,6}]decene; Dimerol alcohol; hydrogenated bisphenol; 9,9(10,10)-bishydroxymethyloctadecanol; 1,2,6-hexanetriol; any of the aforementioned where at least one of the alcohol or amine groups present therein has been reacted with ethylene oxide, propylene oxide or mixture thereof; and combination thereof.

Application No. 10/553,767
 Amendment dated February 18, 2008
 Reply to Restriction Requirement dated January 17, 2008

5

Docket No.: 62260A US

20. (Original) The vegetable oil based polyol of Claim 19 wherein the initiator is glycerol or glycerol where at least one of the alcohol groups of the glycerol has been reacted with ethylene oxide or propylene oxide.

21. (Currently Amended) The vegetable oil based polyol of Claim [[1]] 12
 5 wherein the vegetable oil based polyol is a liquid and has a weight average molecular weight of at least 350.

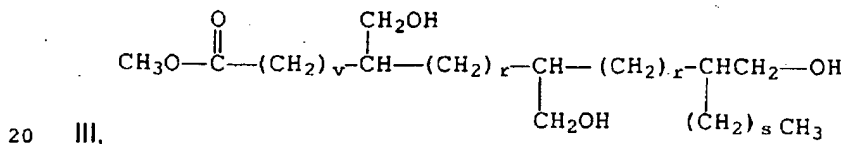
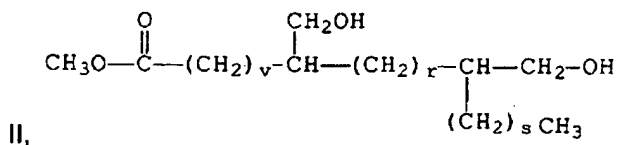
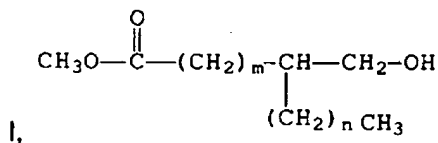
22. (Original) The vegetable oil based polyol of Claim 21 wherein the weight average molecular weight is at least about 1500.

23. (Original) The vegetable oil based polyol of Claim 22 wherein the weight
 10 average molecular weight is at least about 1800.

24-26. (Cancelled)

27. (Currently Amended) A process to make a vegetable oil based polyol,
~~the process~~ comprising,

i) mixing an initiator that is a polyol, polyamine, aminoalcohol or mixture thereof,
 15 and a vegetable oil based monomer having at least one of the formulae:



Application No. 10/553,767
Amendment dated February 18, 2008
Reply to Restriction Requirement dated January 17, 2008

6

Docket No.: 62260A US

where m , n , v , r , and s are integers and m is greater than 3, n greater than or equal to zero and $m+n$ is from 11 to 19, v is greater than 3, r is greater than or equal to zero, s is greater than or equal to zero and $v+r+s$ is from 10 to 18, and

- 5 ii) heating the mixture to a reaction temperature, for a reaction time, while under a vacuum and in the presence of an amount of a catalyst sufficient to form the vegetable oil based polyol, wherein the amount of compound III reacted is at least 0.05 weight percent of the vegetable oil based polyol product.

28. (Original) The process of Claim 27 wherein the catalyst is a tin catalyst and the amount of catalyst is at least about 100 parts per million by weight of the total mixture.

29. (Original) The process of Claim 28 wherein the amount of catalyst is at least about 250 parts per million.

30. (Original) The process of Claim 27 wherein the catalyst is titanium catalyst and the amount of catalyst is at least about 100 parts per million by weight.

15 31. (Original) The process of Claim 30 wherein the amount of catalyst is at least about 500 parts per million.

32. (Original) The process of Claim 28 wherein the catalyst is selected from the group consisting of tin (II) ethylheptanoate, tin (II) octanoate, dibutyltin (IV) dilaurate and combination thereof.

20 33. (Original) The process of Claim 30 wherein the catalyst is titanium tetraisopropoxide, titanium tetraisobutoxide or combination thereof

34. (Original) The process of Claim 27 wherein the catalyst is an enzyme catalyst.

35. (Original) The process of Claim 34 wherein the catalyst is lipase.

25 36. (Original) The process of Claim 27 wherein the catalyst is comprised of a carbonate catalyst.

37. (Original) The process of Claim 36 wherein the carbonate catalyst is K_2CO_3 , $NaHCO_3$ or combination thereof.

Application No. 10/553,767
 Amendment dated February 18, 2008
 Reply to Restriction Requirement dated January 17, 2008

7

Docket No.: 62260A US

38. (Original) The process of Claim 27 wherein the initiator has at least one secondary hydroxyl or secondary aminogroup.

39. (Original) The process of Claim 27 wherein the initiator is glycerol.

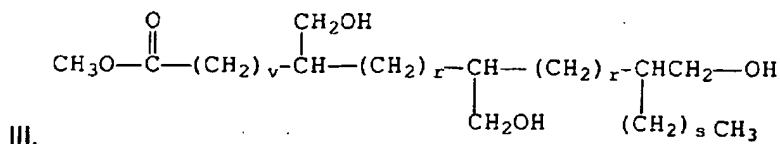
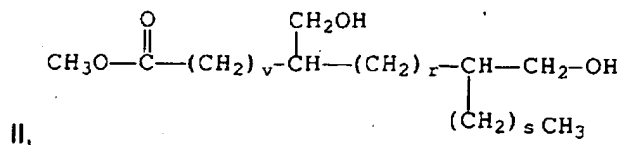
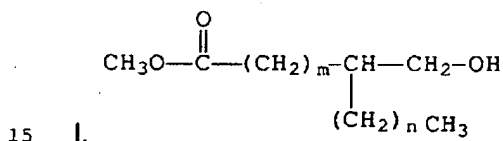
40. (Original) The process of Claim 27, wherein the initiator has volatility
 5 such that at the reaction temperature and vacuum the initiator would be in the absence of the vegetable oil based monomer substantially evaporated in at most about 120 minutes.

41. (Cancelled)

42. (Currently Amended) A polyurethane comprised of the reaction product
 10 of a polyisocyanate and the vegetable oil based polyol of Claim 12.

43. (Currently Amended) A process to make a vegetable oil based polyol, the process comprising,

i) heating, in the presence of a catalyst a vegetable oil based monomer having at least one of the formulae:



Application No. 10/553,767
Amendment dated February 18, 2008
Reply to Restriction Requirement dated January 17, 2008

8

Docket No.: 62260A US

where m , n , v , r , and s are integers and m is greater than 3, n greater than or equal to zero and $m+n$ is from 11 to 19, v is greater than 3, r is greater than or equal to zero, s is greater than or equal to zero and $v+r+s$ is from 10 to 18 until some portion of the $[[VOB]]$ vegetable oil based monomers have reacted and subsequently

5

ii) introducing an initiator that is a polyol, polyamine, aminoalcohol or mixture thereof to the reacted VOB monomers of step (i) for a time and temperature sufficient to form the vegetable oil based polyol under vacuum, wherein the amount of compound III reacted is at least 0.05 weight percent of the vegetable oil based polyol product.

10

44. (Original) The process of Claim 43 wherein the initiator is volatile at the reaction conditions of step (ii).

15

20

25